IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of: | § | Group Art Unit: 2673 |
| Robert C. Frame | § | |
| | § | |
| Serial No.: 09/096,684 | § | Examiner: Lao, L. |
| | § | |
| Filed: June 12, 1998 | § | |
| | § | Atty Docket: COMP:0060/FLE |
| For: PORTABLE COMPUTER SYSTEM | § | PD-25744 |
| | § | |

Assistant Commissioner
  for Patents
Washington, D.C. 20231

Sir:

## APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 1.191 AND 1.192

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on

September 17, 2001, and received by the Patent Office on September 28, 2001.

### 1. REAL PARTY IN INTEREST

The real party in interest is Compaq Computer Corporation by virtue of its acquisition of

Digital Equipment Corporation, the Assignee of the above-referenced application as evidenced

by the Assignment recorded at reel 9253, frame 0669, and dated June 12, 1998.

### 2. RELATED APPEALS AND INTERFERENCES

Appellant is unaware of any other appeals or interferences related to this Appeal. The

undersigned is Appellant's legal representative in this Appeal. Compaq Computer Corporation,

the successor to Digital Equipment Corporation, the Assignee of the above-referenced application, as evidenced by the documents mentioned above, will be directly affected by the Board's decision in the pending appeal.

3.    **STATUS OF CLAIMS**

Claims 1-55 are currently pending, and claims 1-55 are currently under final rejection and, thus, are the subject of this appeal.

4.    **STATUS OF AMENDMENTS**

The Response to Final Official Action, mailed on July 5, 2001, has not been entered.

5.    **SUMMARY OF THE INVENTION AND OF THE DISCLOSED EMBODIMENTS**

As set forth in the Background section of the application, portable computers are available with a wide variety of feature sets and a wide variety of sizes. Larger models are full featured in the sense that they include full size display screens and keyboards, peripheral drives, and ports. However, such large models suffer from relatively heavy weight. Conversely, smaller models allow users to enjoy the benefit of relatively low weight, but such weight reduction comes at the expense of limited features, such as small displays and keyboards.

To address these concerns, Appellant discloses a portable computer system 10 that includes a user interface module 12 and a base computer 14. Page 6; Figs. 1 and 3. The user interface module 12 and the base computer 14 are separate pieces that can be coupled together to be used in a docked mode or that can be uncoupled to be used in an undocked mode. Pages 6

and 7. In the exemplary embodiment, the user interface module 12 includes a full size display 16 and keyboard 18, and the base computer 14 includes a processor 40, memory 42, one or more fixed storage media 22, and communications ports. Page 6; Fig. 3. In its docked stated, the computer system 10 may be comparable in size and function to a full featured lap top computer. Page 9. In the disclosed embodiment, a latching mechanism 34, 35 couples the user interface module 12 to the base computer 14, and bypass connectors 50, 52, 66, and 68 electrically couple the user interface module 12 to the base computer 14 to allow electrical communication. Page 9; Fig. 2. Therefore, in its docked mode, the computer system 10 resembles one of the larger models of notebook computers known in the art.

However, unlike known computers, the user interface module 12 may be physically removed from the base computer 14. The base computer 14 and the user interface module 12 include wireless transmitters and receivers 46, 48, 62, and 67, respectively, that enable the base computer 14 and the user interface module 12 to communicate with one another. Page 8; Fig. 3. Thus, in the undocked mode, the user can access the resources and capabilities of the base computer 14, such as its processor 40, memory 42, and mass storage 44, without being burdened with its weight. The reduction in weight is achieved because the user interface module 12, while including a display 16 and a user input device 60, does not include a processor 40, its associated operating system 54, main memory 42, or mass storage 44. Page 10; Fig. 3.

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6. **ISSUES**

**Issue No. 1:**

Whether claims 1-6, 8-24, and 26-55 are unpatentable under 35 U.S.C. § 103(a) as being

obvious over the Kikinis reference in view of the Goodrich and Swafford, Jr. references.

**Issue No. 2:**

Whether claims 7 and 25 are unpatentable under 35 U.S.C. § 103(a) as being obvious

over the Kikinis reference in view of the Goodrich and Martin references.

7. **GROUPING OF CLAIMS**

In regard to Issue No. 1, independent claims 1, 13, 21, 30, 36, 41, 45, and 50 will stand or

fall separately with their respective dependent claims.

In regard to Issue No. 2, claims 7 and 25 will stand or fall separately.

8. **ARGUMENT**

As discussed in detail below, the Examiner has improperly rejected the pending claims.

Specifically, the Examiner has failed to demonstrate a *prima facie* case of obviousness because

the motivation to combine the references in the manner asserted by the Examiner is clearly

lacking. Accordingly, Appellant respectfully requests favorable consideration by the Board in

view of the remarks set forth below.

**Issue No. 1:**

The Examiner rejected claims 1-6, 8-24, and 26-55 under 35 U.S.C. § 103(a) as being unpatentable over the Kikinis reference in view of the Goodrich and Swafford, Jr. references. Specifically, the Examiner stated:

> As to claims 1-4, 11, 13, 21, 30, and 35-55, Kikinis et al. teach a portable computer system (see figure 5) comprising battery connector (15) (see figures 3, 6, and column 6, lines 55-65); a portable base computer (172) having a wireless receiver (see figures 5, column 1, lines 49-58; column 5, lines 36-40 and column 17, lines 6-10); a processor (24) having a data input operatively connected to the wireless receiver and having a power input (see figures 5-6; column 3, lines 41-44 and column 10, lines 59-66); mass storage (28 or 62) (see figures 5-6 and column 10, lines 59-66) and a wireless transmitter (see column 1, lines 49-58); column 5, lines 36-40 and column 17, lines 6-10); and a portable user interface module (10) having a wireless receiver (94) see figures 1A, 1B, 13; column 1, lines 49-58; column 16, lines 60-68; column 17, lines 1-10 and column 18, lines 32-36); a display (25) for displaying information having a data input connected to the wireless receiver (94) and having a power input connected to one of the battery connectors (15) (see figures 1A, 1B, 3, 6, 13; column 7, lines 41-50; column 1, lines 49-58; column 16, lines 60-68; column 17, lines 1-10 and column 18, lines 32-36); a user interface device (16) (see figures 1A, 1B, 3 and column 7, lines 46-50) and a wireless transmitter (94) (see figure 13; column 1, lines 49-58; column 16, lines 60-68 and column 17, lines 1-10).

> Kikinis et al. fail to disclose a processor connected to a battery and a processor-less portable user interface.

> Goodrich et al. teach a processor (portable computer) connected to a battery (see column 1, lines 13-21). It would have been obvious to have modified Kikinis et al. with the teaching of Goodrich et al. since a battery can be easily removed for periodic replacement (see Kikinis's column 6, lines 64-65).

> Swafford, Jr. et al. teach a computer system comprising a processor-less portable user interface (2) (see figures 1-3; column 2, lines 1-6 and column 7, lines 31-47). It would have been obvious to have modified Kikinis et al. as modified with the teaching of Swafford, Jr. et al. since the processor for controlling

an interface unit (2) can be located in a base unit (14) (Swafford, Jr.'s column 7, lines 31-47) and a change in location is generally recognized as being within the level of ordinary skill in the art.

As to claims 13, 30, 36, 41-43, 45, 47, 48, and 50-52, Swafford, Jr. et al. teach a base unit (14) does not have a display device and an input device (see figures 1-3 and column 5, lines 5-16). It would have been obvious to have modified Kikinis et al. as modified with the teaching of Swafford, Jr. et al., so as to simplify the base unit by eliminating a display and an input device in a base unit.

As to claims 2, 14, 22, 33, and 37, Kikinis et al. teach a portable computer system comprising a mechanical connector to hold the base computer (172) in contact with the user interface module (10) (see figures 1A, 5, 6; column 5, lines 1-40).

As to claims 3, 15, 23, 33, and 37, Kikinis et al. teach a portable computer system comprising an electrical connector (105) for electrically connecting the base computer (172) to the user interface module (10) (see figures 1A, 5, 6; column 5, lines 1-40; column 9, lines 40-43 and column 11, lines 3-40).

As to claims 4 and 16, Kikinis et al. teach an electrical connector (14) to bypass the wireless transmitters and receivers (94) (see figures 5, 6, 13; column 11, lines 3-9 and column 16, lines 60-64).

As to claims 5, 9, 17, 27, and 28, Kikinis et al. teach the user interface module (10) can display a pointing device (18) and a window (72) (see figures 1B, 4; column 5, lines 54-63 and column 8, lines 13-68).

As to claims 6 and 18, Kikinis et al. teach a portable computer system comprising a local are network (see column 17, lines 6-10).

As to claims 8 and 26, Kikinis et al. teach a portable computer comprising a keyboard (see figure 4; column 8, lines 25-42 and column 19, lines 56-64).

As to claims 10, 19, 29, 32, and 34, it would have been obvious to have the user interface device (10) with the same size as portable base computer (172) since such a modification would have involved a mere change in the size of a component. A change

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in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

As to claims 12, 20, and 21, Kikinis et al. teach a user interface module comprising obstacle-tolerant wireless transmitter and receiver (IR communication) (see figure 13; column 1, lines 49-58 and column 17, lines 6-10).

As to claim 31, Goodrich et al. teach a portable user interface is about nine pounds (see column 1, lines 20-23).

The Examiner's rejection of the claims is respectfully traversed. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). To establish a *prima facie* case, the Examiner must show that the combination includes all of the claimed elements and, also, must present a convincing line of reasoning as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

It is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness in view of the Kikinis/Goodrich/Swafford combination, because the Examiner has not properly demonstrated a suggestion that would have motivated one skilled in the art to modify the teachings of the references to obtain the claimed invention.

Briefly, the Kikinis reference discloses a personal digital assistant (PDA) that may be docked with a general-purpose host computer. Both the PDA and the host computer include a local CPU, a memory, an input device, and a display so that each can function as a stand-alone computer. The PDA also can be docked with the host computer, such that the host computer, by using its own processor, can access and download the PDA's memory into the host computer's memory.

The Goodrich reference discloses a combined notepad and notebook computer system. The system includes a main unit which houses the display, drives, and other electronics of a computer. The display functions as the display device in both the notepad mode of operation and the notebook computer mode of operation. The display, when used with a stylus, also functions as the input device in the notepad mode. In the notebook mode, the input device is provided by a keyboard that is detachable from the main unit.

The Swafford reference discloses a wireless interactive consumer video system that includes an input and display unit that communicates with a video electronics unit. Communications between the input and display unit and the video electronics unit may be wireless.

In rejecting independent claims 1, 21, and 41, the Examiner has asserted that the primary reference, Kikinis, could be modified with the teachings of the Goodrich and Swafford references to obtain a computing system comprising a processor-less user input device. Independent claim 1 recites a portable computer system comprising a portable base computer and a processor-less

portable user interface module detachably coupleable to the base computer. Independent claim 21 recites a user interface module for use with a portable base computer system. The base computer system "comprises a processor to execute an application program," and the user interface module "does not comprise a processor to execute an application program." Independent claim 41 recites a portable computer system comprising a base unit, a portable user interface module detachably coupleable to the base unit, and *only one processor*. Claim 41 further limits the only one processor to being disposed within the base unit.

As discussed above and in contrast to the systems recited in claims 1, 21, and 41, the Kikinis reference discloses a system having a host general purpose computer and a portable PDA, *each of which includes a processor*. Because a processor is in each of the individual devices, the host computer and the portable PDA form a host/satellite combination, with each device being capable of functioning as an independent, stand-alone processing unit. Thus, removal of the processor from either the PDA or the host computer would destroy the independent functionality of the individual units and defeat the purpose of having a portable computing device which can be docked to a host computer such that the host can access and control (e.g., download memory) the PDA. It is a long standing tenet that a modification or combination that destroys the functionality of a device is improper. References cannot properly be combined with each other when such a combination would result in destroying that on which the invention of one of the references is based. *Ex parte Hartmann*, 186 U.S.P.Q. 366, 367 (PTO Bd. App. 1974).

Indeed, if either one of the PDA and the host computer did not have a processor, there would be no reason to dock the PDA with the host. That is, if the PDA could not function as an independent computing device, no reason would exist to dock the PDA to the host such that the host could download the PDA's memory (i.e., synchronize the PDA and the host). Likewise, if the host could not function as an independent computing device, again there would be no reason to synchronize the host with the PDA. Moreover, without a processor, the host computer would not be capable of accessing and controlling the PDA such that it could download the PDA's memory.

It is noted that the requisite suggestion to modify a reference with the teachings of another reference exists only if the *desirability* of making the modification can be shown. *See, e.g., Uniroyal Inc. v. Rudkin-Wiley Corp.,* 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). If, as in the present case, the modification of the cited reference would destroy the intended purpose or function of the cited reference, then the desirability of making the modification, and thus the requisite suggestion, is lacking. *See In re Gordon,* 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

Even though removal of a processor from either the PDA or the host computer disclosed in the Kikinis reference would destroy the functionality and purpose of the individual devices and the host/satellite combination, the Examiner has asserted that a suggestion does indeed exist for the modification. Specifically, the Examiner has stated:

> Swafford, Jr. et al. teach a computer system comprising a
> processor-less portable user interface (2) (see figures 1-3; column
> 2, lines 1-6 and column 7, lines 31-47). *It would have been*
> *obvious to have modified Kikinis et al as modified with the*
> *teaching of Swafford, Jr. et al since the processor for controlling*

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*an interface unit(2) can be located in a base unit (14) (Swafford, Jr.'s column 7, lines 31-47 and a change in location is generally recognized as being within the level of ordinary skill in the art.*

(emphasis added).

Even if "a change of location" is obvious (although Appellant contends it is not), it is respectfully submitted that the modification at issue in this case is *removal* of a processor, not "a change of location." Moreover, to establish a *prima facie* case of obviousness, the Examiner cannot merely state a suggestion or motivation in the abstract, but rather must show that the prior art suggests the *desirability* (i.e., the motivation) of modifying one reference in view of the other. Thus, the suggestion or motivation must be examined within the context of the teachings of the cited references. In the absence of evidence that suggests the desirability of combining references in a proposed manner, such combination is not available to preclude patentability under 35 U.S.C. § 103. *King Instrument Corp. v. Otari Corp.*, 226 U.S.P.Q. 402 (Fed. Cir. 1985). Elements of separate prior patents cannot be combined when there is no suggestion of such combination anywhere in those patents. *Panduit Corp. v. Dennison Manufacturing Co.*, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987). There must be some logical reason apparent from positive, concrete evidence of record that justifies a combination of primary and secondary references. *In re Laskowski*, 10 U.S.P.Q.2d 1397 (Fed. Cir. 1989).

It is submitted that, in the context of these cited references, the Examiner's proffered suggestion is insufficient, because removing a processor from one of the devices disclosed in the Kikinis reference would destroy the functionality and purpose of the individual device and of the

combination of the two devices. Because functionality would be destroyed, such a modification could only be viewed as *undesirable*. Accordingly, a motivation to modify the Kikinis reference with the teachings of the Swafford reference to obtain the invention recited in independent claims 1, 21 and 41 cannot be shown.

Similar issues exist regarding the rejection of independent claims 13, 30, 36, 41 (again), 45, and 50. With respect to independent claim 13, it recites a portable base computer system for use with a mobile user interface module that comprises a two-dimensional display and a user input device. The portable base computer comprises a processor, but does *not* comprise a display device operatively connected to the processor to display graphical information based on results generated by the processor.

Independent claim 30 recites a portable computer system comprising a portable means for processing application programs in response to user interface signals, and a portable user interface means comprising a first user input device to generate user interface signals. The portable means for processing does *not* comprise a second user input device to generate user interface signals.

Independent claim 36 recites a computing method wherein a base computer at a first location communicates by a wireless communication method with a remote user interface module. The remote user interface module comprises a portable user input device. At a second location, the base computer and the user interface module communicate by a wired communication method. At both the first and second locations, application programs are

processed in the base computer in response only to user input signals generated via the portable user input device.

Independent claim 41 recites a portable computer system comprising a base unit and a portable user interface module comprising a user input device and a display device. The user interface module is detachably coupleable to the base unit. The system also comprises only one processor which is disposed within the base unit. The processor is configured to respond to user input signals from the user input device regardless of whether the base unit is coupled to or detached from the user interface module.

Independent claim 50 recites a portable computer system comprising only one user input device, a base unit having a processor, and a portable user interface module. The user interface module comprises both the user input device and a display. The processor in the base unit is responsive only to user input signals that are input from the only one user input device regardless of whether the base unit is couple to or detached from the user interface module.

With respect to these claims, the Examiner has stated:

> As to claims 13, 30, 36, 41-43, 45, 47, 48 and 50-52, Swafford, Jr. et al teach a base unit (14) does not have a display device and an input device (see figures 1-3 and column 5, lines 5-16). *It would have been obvious to have modified Kikinis et al as modified with the teaching of Swafford, Jr. et al, so as to simplify the base unit by eliminating a display and an input device in a base unit.*

(emphasis added).

The Examiner's alleged suggestion for modifying the Kikinis reference with the teachings of the Swafford reference is traversed. Again, there simply is no motivation that would have led one skilled in the art to "simplify" any device disclosed in the Kikinis reference by *removing* the display or the user input device, because such simplification would destroy the functionality of the host/satellite combination and the devices' abilities to function as stand-alone processing units. That is, if either the host computer or the PDA did not have a display connected to its respective processor, they would not be useful as independent processing devices. Likewise, the lack of a user input device for either the host computer or the PDA would destroy the ability of that device to function independently in the manner clearly intended by the Kikinis reference.

In view of the foregoing discussion, it is respectfully submitted that the Examiner has not presented evidence sufficient to establish a *prima facie* case of obviousness in view of the combination of the Kikinis, Goodrich, and Swafford references. Accordingly, withdrawal of the rejection of claims 1-6, 8-24, and 26-55 in view of the combined references is respectfully requested.

**Issue No. 2:**

The Examiner rejected claims 7 and 25 under 35 U.S.C. § 103(a) as being unpatentable over the Kikinis reference in view of the Goodrich and Martin references. Specifically, the Examiner stated:

> Kikinis et al. fail to disclose a portable interface device comprising a 640X480 display.

Martin et al. teach a portable computer system comprising a 640X480 display for displaying a window, a pointing device (224) and a keyboard (222) with letter and ten decimal keys (see figures 1, 10, 11; column 5, lines 31-36; column 33, lines 28-37 and column 34, lines 1-7). It would have been obvious to have modified Kikinis et al. as modified with the teaching of Martin et al., since Kikinis et al. have been disclosed a display resolution could be changed (see column 8, lines 2-8).

The Examiner's rejection is respectfully traversed because the Kikinis/Goodrich/Martin combination does not teach, disclose, or suggest all of the elements recited in claims 7 and 25. With respect to claim 7, it depends from claim 1 and, thus, recites a portable computer system comprising a portable base computer and a processor-less portable user interface module that is detachably coupleable to the base computer. The processor-less user interface module comprises a display and a user input device.

As discussed above, the Kikinis reference does not teach, disclose, or suggest a *processor-less* user interface module having a display and a user input device. Instead, the Kikinis reference discloses a system having a host computer and a portable PDA, each of which includes a processor, allowing each of the devices to process applications independently of the other.

The Goodrich reference does not compensate for the deficiencies of the Kikinis reference. The only unit disclosed in the Goodrich reference, which functions as either a notepad or a notebook computer, includes an integral display *and* a processor. Thus, the Goodrich reference does not teach, disclose, or suggest any type of user interface device that includes a display, but does *not* include a processor.

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The Martin reference does not compensate for the deficiencies of the Kikinis and Goodrich references. Indeed, the Examiner cites the Martin reference merely for its disclosure of a portable interface device comprising a 640 x 480 display.

Based on the foregoing, it is submitted that the Kikinis/Goodrich/Martin combination does not render claim 7 obvious because the combination does not teach, disclose, or suggest all of the elements recited in claim 7. To the extent that the Examiner meant to include the Swafford reference in the combination (but did not), it is submitted that the Examiner has not presented sufficient evidence of a suggestion to modify the Kikinis reference with the teachings of the Swafford reference, as discussed in detail above. Accordingly, withdrawal of the rejection of claim 7 is respectfully requested.

With respect to claim 25, it depends from claim 21 and, thus, recites a user interface module for use with a portable base computer system that includes a processor to execute an application program. The user interface module comprises a display and a user input device. Claim 25 further is limited such the user interface module does *not* comprise a processor to execute an application program.

As discussed above with respect to claim 7, the Kikinis reference, the Goodrich reference, and the Martin reference, alone or in combination, do not teach, disclose, or suggest a user interface module that *does not* include a processor to execute an application program. To the extent that the Examiner intended to combine the Swafford reference with the Kikinis/Goodrich/Martin combination, it again is submitted that the requisite suggestion to

modify the Kikinis reference with the teachings of the Swafford reference has not been shown.

Accordingly, withdrawal of the rejection of claim 25 is respectfully requested.

## 9.     <u>CONCLUSION</u>

In view of the above remarks, Appellant respectfully submits that the Examiner has

provided no supportable position or evidence that claims 1-55 are obvious under Section

103(a). Accordingly, Appellant respectfully requests that the Board find claims 1-55

patentable over the prior art of record, withdraw all outstanding rejections, and allow claims

1-55.


In accordance with 37 C.F.R. § 1.136, Appellant requests that this and any future reply

requiring an extension of time be treated according to the General Authorization For Extensions

Of Time previously submitted.

The Commissioner is authorized to charge the requisite fee of $320.00, and any additional fees which may be required, to the credit card listed on the attached PTO-2038. However, if the PTO-2038 is missing, if the amount listed thereon is insufficient, or if the amount is unable to be charged to the credit card for any other reason, the Commissioner is authorized to charge Deposit Account No. 06-1315; Order No. COMP:0060/FLE (PD-25744).

Respectfully submitted,

Date:  November 28, 2001

Michael G. Fletcher
Reg. No. 32,777
FLETCHER, YODER & VAN SOMEREN
P.O. Box 692289
Houston, TX  77269-2289
(281) 970-4545

10. **APPENDIX OF CLAIMS ON APPEAL**

1. A portable computer system, comprising:

a portable base computer comprising:

    a first wireless receiver,

    a processor having a data input operatively connected to the first wireless receiver,

    and

    a first wireless transmitter operatively connected to the processor, and

a processor-less portable user interface module being detachably coupleable to the

    portable base computer, the portable user interface module comprising:

    a second wireless receiver,

    a two-dimensional display having a data input operatively connected to the second

        wireless receiver of the portable user interface module,

    a user input device, and

a second wireless transmitter operatively connected to the user input device.

2.      The portable computer system of claim 1 comprising a mechanical connector operative to hold the base computer in contact with the processor-less user interface module.

3.      The portable computer system of claim 1 comprising an electrical connector operative to electrically connect the base computer to the processor-less user interface module.

4.      The portable computer system of claim 3 wherein the electrical connector comprises bypass contacts operative to bypass the wireless transmitters and receivers of the base computer and the processor-less user interface module.

5.      The portable computer system of claim 1 wherein the base computer comprises a display primitive generator operatively connected between the processor and the wireless transmitter of the base computer, and wherein the display primitive generator is operative to send display primitives to the processor-less user interface module that are capable of displaying a pointing-device-driven, general-purpose, window-based operating system screen on the display of the processor-less user interface module.

6.     The portable computer system of claim 1 comprising at least a portion of a local area network operatively connected between the processor and the display, and wherein the base computer system is operative to communicate with the processor-less user interface module using packet traffic on the local area network.

7.     The portable computer system of claim 1 wherein the display has a resolution of at least 640X480 pixels.

8.     The portable computer system of claim 1 wherein the processor-less user interface device comprises a keyboard that comprises separate keys for all of the letters of the alphabet and the ten decimal digits.

9.     The portable computer system of claim 1 wherein the user input device comprises a pointing device.

10.     The portable computer system of claim 1 wherein the portable base computer comprises a rectangular housing for supporting its processor, receiver and transmitter, wherein the processor-less user interface module comprises a rectangular housing for supporting its display device, user input device, receiver and transmitter, and wherein one of the two largest

faces of the housing of the base computer is of substantially the same size and shape as one of

the two largest faces of the housing of the processor-less user interface module.

11. The portable computer system of claim 1 wherein the portable base computer

system comprises at least one battery connector that is operatively connected to the processor and

wherein the processor-less user interface module includes at least one battery connector

operatively connected to the display.

12. The portable computer system of claim 1 wherein the wireless transmitters are

obstacle-tolerant transmitters and the wireless receivers are obstacle-tolerant receivers.

13. A portable base computer system for use with a mobile user interface module that

comprises a two-dimensional display, a first wireless receiver, a first wireless transmitter, a user

input device, and a housing, the portable base computer comprising:

a second wireless receiver constructed and adapted to communicate with the first wireless

transmitter of the user interface module,

a processor responsive to commands received from the second wireless receiver, the

processor configured to execute an application program and generate results

therefrom,

a second wireless transmitter responsive to the processor and constructed and adapted to

communicate with the wireless receiver of the user interface module, and

a housing for holding the processor, the second wireless receiver, and the second wireless

transmitter,

wherein the portable base computer system does not comprise a display device

operatively connected to the processor to display graphical information based on

the results generated by the processor.

14.     The portable base computer system of claim 13 comprising at least one

mechanical docking connector mounted relative to the housing and operative to hold the base

computer in contact with the user interface module.

15.     The portable base computer system of claim 13 comprising at least one electrical

docking connector mounted relative to the housing and operative to electrically connect the

portable base computer system to the user interface module.

16.     The portable base computer system of claim 15 wherein the electrical connector comprises bypass contacts operative to bypass the wireless transmitters and receivers of the portable base computer system and user interface module.

17.     The portable base computer system of claim 13 wherein the portable base computer system comprises a display primitive generator to which the wireless transmitter of the base computer system is responsive to send display primitives to the user interface module, and wherein the display primitive generator is operative to send display primitives to display the graphical information on the display of the user interface module.

18.     The portable bases computer system of claim 13 comprising at least a portion of a local area network operatively connected between the processor and the display, and wherein the portable base computer system is operative to communicate with the user interface module using packet traffic on the local area network.

19.     The portable bases computer system of claim 40 wherein the portable base computer system comprises a rectangular housing for supporting its processor, receiver and transmitter, and wherein one of the two largest faces of the housing of the portable base computer system is of substantially the same size and shape as one of two largest faces of a housing of the user interface module.

20.     The portable base computer of claim 13 wherein the wireless transmitters are obstacle-tolerant transmitters, and the wireless receivers are obstacle-tolerant receivers.

21.     A user interface module for use with a portable base computer system that comprises a processor to execute an application program, an obstacle-tolerant wireless transmitter, an obstacle-tolerant wireless receiver, and a housing bearing at least one docking connector, the user interface module comprising:

an obstacle-tolerant wireless receiver constructed and adapted to communicate with the wireless transmitter of the portable base computer system,

a two-dimensional display responsive to the wireless receiver,

a user input device,

an obstacle-tolerant wireless transmitter responsive to the user input device, and being constructed and adapted to communicate with the wireless receiver to the portable base computer system, and

at least one docking connector constructed and adapted to mate directly to the connector of the portable base computer system,

wherein the user interface module does not comprise a processor to execute an

application program.

22.    The user interface module of claim 21 wherein the docking connector is a

mechanical connector operative to hold the portable base computer system in contact with the

user interface module.

23.    The user interface module of claim 21 wherein the docking connector is an

electrical connector operative to electrically connect the portable base computer system to the

user interface module.

24.    The user interface module of claim 23 wherein the electrical connector includes

bypass contacts operative to bypass the wireless transmitters and receivers of the portable base

computer system and user interface module.

25.    The user interface module of claim 21 wherein the display has a resolution of at

least 640X480 pixels.

26.     The user interface module of claim 21 wherein the user interface device comprises a keyboard that includes separate keys for all of the letters of the alphabet and the ten decimal digits.

27.     The user interface module of claim 21 wherein the user interface device comprises a pointing device.

28.     The user interface module of claim 21 wherein the user interface module comprises a display primitive decoder responsive to display primitives received solely from the base computer system on the display.

29.     The user interface module of claim 21 wherein the user interface module comprises a rectangular housing for supporting its display device, user input device, receiver and transmitter, and wherein one of the two largest faces of the housing of the user interface module is of substantially the same size and shape as one of two largest faces of a housing of the portable base computer system.

30.     A portable computer system, comprising:

portable means for processing application programs at a first location in response to user

interface signals, the means for processing being readily transportable in hand

luggage,

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first wireless communication means for transmitting results from the portable means for

processing, and the first wireless communications means for relaying received

user interface signals to the portable means for processing,

second wireless communication means for receiving the results from the first

communication means and for transmitting the user interface signals to the first

wireless communication means, and

portable user interface means responsive to the results received by the second wireless

communication means to display graphical user interface constructs on a two-

dimensional screen, wherein the portable user interface means comprises a first

user input device to generate user interface signals, and wherein the portable

means for processing does not comprise a second user input device to generate

user interface signals.

31.     The portable computer system of claim 30 wherein the portable means for processing, the first and second wireless communication means, and the portable user interface together weigh under about nine pounds.

32.     The portable computer system of claim 31 wherein the portable means for processing, the first and second wireless communication means, and the portable user interface together fit within a space of less than about two inches thick by about nine inches by about twelve inches.

33.     The portable computer system of claim 30 comprising means for together transporting the portable means of processing, the first and second wireless communication means, and the portable user interface in a mechanically and electrically docked state.

34.     The portable computer system of claim 30 comprising means for housing the portable means for processing, comprising means for housing the user interface means, and wherein one of the two largest faces of the means for housing the portable means for processing is of substantially the same size and shape as one of the two largest faces of the means for housing the user interface means.

35.     The portable computer system of claim 30 comprising means included in the portable means for processing to generate display primitives and send the display primitives to the user interface means via the first and second communication means.

36.     A computing method, comprising the steps of:

processing application programs in a base computer system at a first location,

communicating results from the application programs by a wireless communication method to a user interface module comprising a portable user input device, the user interface module being disposed remote from the base computer system,

displaying results of the step of communication on a screen of the user interface module,

together transporting the base computer system and the user interface module to a second location,

processing application programs in the base station at the second location,

again communicating results from the application programs to the user interface module, and

displaying results of the step of again communicating on a screen of the user interface module,

wherein, at both the first location and the second location, the steps of processing application programs in the base station are performed in response only to user input signals generated via the portable user input device.

37.     The computing method of claim 36 wherein the step of together transporting transports the base station and the user interface module in a mechanically and electrically docked state.

38.     The computing method of claim 36 wherein the step of communicating results communicates display primitives.

39.     The portable computer system of claim 1 wherein the portable base computer comprises:

one or more battery connectors,

a power input operatively connected to at least one of the battery connectors, and

a mass storage operatively connected to the processor.

40.     The computer system of claim 13 comprising:

one or more battery connectors,

a power input operatively connected to at least one of the battery connectors, and

a mass storage operatively connected to the processor.

41.     A portable computer system, comprising:

a base unit;

a portable user interface module detachably coupleable to the base unit, the portable user

interface module comprising a user input device and a display device; and

only one processor responsive to user input signals input from the user input device,

wherein the only one processor is disposed within the base unit and is configured to

respond to the user input signals input from the user input device regardless of

whether the base unit is coupled to the portable user interface module or is

detached from the portable user interface module.

42.    The portable computer system as recited in claim 41, wherein the user input

device is the only user input device.

43.    The portable computer system as recited in claim 41, wherein the display device is

the only display device, wherein the processor is configured to execute program code and

produce results therefrom, and wherein the display device is configured to display visible indicia

corresponding to the results regardless of whether the base unit is coupled to the portable user

interface module or is detached from the portable user interface module.

44.    The computer system as recited in claim 41, wherein the base unit comprises a

first wireless receiver operatively coupled to the processor and a first wireless transmitter

operatively coupled to the processor, and wherein the portable user interface module comprises a

second wireless receiver operatively coupled to the display device and a second wireless

transmitter operatively coupled to the user input device.

45.     A portable computer system, comprising:

a base unit comprising a processor to execute an application program and to produce

results therefrom;

only one display device to display visible indicia based on the results produced by the

processor; and

a portable user interface module detachably coupleable to the base unit, the portable user

interface module comprising the only one display device,

wherein the only one display device displays the visible indicia regardless of whether the

base unit is coupled to the portable user interface module or is detached from the

portable user interface module.

46.     The portable computer system as recited in claim 45, wherein the portable user

interface module comprises a user input device

47.     The portable computer system as recited in claim 46, wherein the user input device is the only user input device, and wherein the processor is configured to respond only to user input signals input via the only user input device regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

48.     The portable computer system as recited in claim 45, wherein the display device is the only display device, wherein the processor is configured to execute program code and produce results therefrom, and wherein the display device is configured to display visible indicia corresponding to the results regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

49.     The computer system as recited in claim 45, wherein the base unit comprises a first wireless receiver operatively coupled to the processor and a first wireless transmitter operatively coupled to the processor, and wherein the portable user interface module comprises a second wireless receiver operatively coupled to the display device and a second wireless transmitter operatively coupled to the user input device.

50. A portable computer system, comprising:

only one user input device;

a base unit comprising a processor responsive to user input signals from the only one user input device; and

a portable user interface module detachably coupleable to the base unit, the portable user interface module comprising a display and the user input device,

wherein the processor is responsive only to user input signals that are input from the only one user input device regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

51. The portable computer system as recited in claim 50, wherein the display device is the only display device, wherein the processor is configured to execute program code and produce results therefrom, and wherein the display device is configured to display visible indicia corresponding to the results regardless of whether the base unit is coupled to the portable user interface module or is detached from the portable user interface module.

52.     The portable computer system as recited in claim 50, wherein the processor is the only processor.


53.     The computer system as recited in claim 50, wherein the base unit comprises a first wireless receiver operatively coupled to the processor and a first wireless transmitter operatively coupled to the processor, and wherein the portable user interface module comprises a second wireless receiver operatively coupled to the display device and a second wireless transmitter operatively coupled to the user input device.


54.     The portable base computer system of claim 17, wherein the graphical information comprises a point-device-driven, general-purpose, window-based operating system.


55.     The user interface module of claim 28, wherein the display primitive decoder is response to display primitives received solely from the base computer system to display a point-device-driven, general-purpose, window-based operation system screen on the display.